Developmental Psychology

Development: a dynamic process that begins with conception and ends with death. Developmental psychology deals with the changes that occur during the course of human life. In this article, we are going to discuss developmental processes and primary/secondary socialization as well as present the psychosexual theories of Freud and Erikson. With this, you will be optimally prepared for tricky questions about developmental psychology in your medical exams.

Important Terms in Developmental Psychology

**Development:** Changes in the organism. **Ontogenesis** describes the development of an individual from a germ to a fully grown human being. **Phylogenesis** refers to the evolution of an entire group, such as a species.

**Socialization:** Our socialization develops and changes permanently under the influence of social experiences. Learning processes, norms, moral concepts of a particular culture – they all leave a lasting imprint on us and make us grow into a mature personality that is capable of social interaction.

**Primary Socialization:** At the age of 0–3, primary socialization takes place inside the
Secondary socialization: At the age of 3, secondary socialization begins via the institutions of friends, school, job, etc.

Maturation and learning: The developmental process is influenced by genetic, social and mental factors. The genetic factors are responsible for the process of maturation. Some processes of maturation occur spontaneously, on one hand, or in the context of learning processes, on the other.

Learning = Stimulation from the environment and training

Maturing and learning: When behavioral changes occur across different cultures at a certain moment in the lifespan, this is called maturation. Learned behavior is more variable with respect to the point in time and requirements. Deprivation experiments also show that newborns undergo certain behavioral changes even without specific environmental stimuli.

Critical/sensitive period: In these maturation stages, the organism is especially sensitive for learning certain ways of behavior. If stimuli that are essential for this behavior do not occur in this time frame, the learning process is only partly possible and usually very difficult (for example, language acquisition, the formation of emotional relationships).

Intrauterine Development

Note: Pregnancy (mother) = time of gestation (child) = 40 weeks.

Pregnancy can be divided into three stages.

- In the 1st stage (months: 0-3, terminology: embryo), the organs develop.
- In the 2nd stage (months: 3-6, terminology: from the 4th month, fetus), the organs undergo a functional differentiation.
- In the 3rd stage (months: 6-9), mainly physical growth occurs. Intense mental stress regarding family and/or job can lead to miscarriages. Premature births often happen to unmarried and divorced women and to women from lower social classes.

Prenatal Development

The following chart gives you an overview about the cornerstones of prenatal developmental steps:
<table>
<thead>
<tr>
<th>Week 4</th>
<th>Movements of the embryo can be seen on a sonograph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 8</td>
<td>Development of movement patterns</td>
</tr>
<tr>
<td>Week 6-20</td>
<td>Fetal movements</td>
</tr>
</tbody>
</table>

Maturation and Learning

The key difference between maturation and learning is that learning occurs through experience, knowledge, and practice while maturation comes from within an individual as he/she grows and develops.

Sensory functions

- **Vision:** Newborns are shortsighted and spend a lot of time looking around and fixating objects. Visual behavior of an adult is not reached until 2 years of age!
- **Hearing:** Newborns can easily distinguish sounds. Different aspects of human language can be identified.
- **Tasting:** Newborns can distinguish sweet, sour, salty and bitter and particularly prefer sweet things.
- **Smelling:** Newborns recognize the scent and smell of the breast milk of their own mother.

Motor functions

‘Practice makes perfect’ is a well-known phrase; however, it does not apply to motor development! The process of motor maturation follows its own internal rules. Exercise can only help to achieve safety and agility. Two trends can be distinguished in motor development:

- **Cephalocaudal trend:** Muscle control develops from the head to caudal.
- **Proximodistal trend:** Muscles of the torso can be controlled earlier than proximal ones.

Stranger anxiety

Stranger anxiety begins at about 8 months old and is attributed to the child’s developing ability to distinguish between familiar and unfamiliar persons. The child’s inner question is: “Who is trustworthy and ensures my mental and physical well-being?” Stranger anxiety decreases continually from the third year of life.

Separation anxiety

Between 6 and 9 months of age, the child dares to go on first “discovery tours.” Separation anxiety can be considered as a limit to this instinct. Between 2-3 years of age, separation anxiety peaks, continually decreasing afterward.

Potty training

Conscious urination and defecation begin at the age of 2 years with the help of parents and instructive assistance.
Emotions and Bonding

Note: Mother-child relationship = bonding
The process of bonding develops and is aided by a lot of body contact, breastfeeding, and permanence of persons. Ainsworth designed the Strange Situation Procedure and observed 3 fundamental attachment styles.

Strange Situation Procedure by Ainsworth

<table>
<thead>
<tr>
<th>Attachment Style</th>
<th>Mother Behavior</th>
<th>Child Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Anxious-avoidant</td>
<td>Mother shows little care</td>
<td>Child shows little emotion after the mother returns seeks little closeness</td>
</tr>
<tr>
<td>2) Secure</td>
<td>Sense of the mother: reliable, open, friendly, sensitive, caring</td>
<td>Child shows distress when the mother is absent, seeks closeness and contact after her return</td>
</tr>
<tr>
<td>3) Anxious-ambivalent</td>
<td>Ambivalent behavior of the mother</td>
<td>Child is obviously distressed, sometimes angry during the mother’s absence, ambivalent behavior after her return</td>
</tr>
</tbody>
</table>

Cognitive Development

Piaget’s theory of cognitive development

The Swiss developmental psychologist Jean Piaget paved the way for most of what is known today about the development of cognition, thinking, imagination and problem-solving. Piaget was of the opinion that especially active interaction is important for the child’s development. In his theory, children act in accordance with organic schemata of knowledge and behavior. However, the constant new input from the environment requires adaption. Two processes of adaption can be classified:

- Assimilation: Already existing schemata are used to encompass new experiences and information.
- Accommodation: New experiences and information alter the existing schemata.

These two mechanisms are supposed to maintain balance (equilibration).

Overview of the stages of cognitive development by Piaget

<table>
<thead>
<tr>
<th>Age of life</th>
<th>Stage</th>
<th>Typical attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth – 2 years</td>
<td>Sensorimotor</td>
<td>Fundamental forms of perceiving the environment are being developed; coordination of functions (e.g., vision and grasping); object permanence (objects still exist even if they can no longer be seen)</td>
</tr>
<tr>
<td>2 - 6/7 years</td>
<td>Preoperational</td>
<td>Naïve realism: development of imagination/comprehension of symbols/use of symbols (e.g., language acquisition)</td>
</tr>
<tr>
<td>2 - 4 years</td>
<td>Pre conceptual-symbolic</td>
<td>Animism, a generalization of concepts</td>
</tr>
</tbody>
</table>
Language and thinking

<table>
<thead>
<tr>
<th>Month</th>
<th>Parameters of the language stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>“Cooing” sounds, many vowels</td>
</tr>
<tr>
<td>3</td>
<td>“Singing sounds”, imitation of the parents</td>
</tr>
<tr>
<td>6</td>
<td>First words are comprehended conceptually, crying ↓, “chattering” ↑</td>
</tr>
<tr>
<td>7-8</td>
<td>Direct sound imitation</td>
</tr>
<tr>
<td>8-10</td>
<td>Sound chains (pa-pa, ma-ma, la-la)</td>
</tr>
<tr>
<td>9</td>
<td>Following conversations of others, social gestures can be understood and performed</td>
</tr>
<tr>
<td>12</td>
<td>Persons and objects of daily life can be recognized</td>
</tr>
<tr>
<td>12-18</td>
<td>Earliest speaking of first words</td>
</tr>
</tbody>
</table>

Language is absolutely necessary to achieve social cognition. Ego consciousness, for example, is expressed verbally at the end of the 2nd year of life in the “defiant phase”: “Me! I want!” This phase is an important step in developing the ability to understand other perspectives and develop empathy.

Moral development (Kohlberg, 1958)

**Moral:** Value and belief systems that we use to decide about right and wrong behavior. The American psychologist Lawrence Kohlberg created a stage model about moral development, with each stage subdivided into two substages. It represents an extension of Piaget’s model of cognitive development.

<table>
<thead>
<tr>
<th>Preconventional (2-10 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1:</strong> 2 – 6 years: Obedience and punishment orientation</td>
</tr>
<tr>
<td><strong>Stage 2:</strong> 6 – 10 years: Instrumental relativistic exchange, recognizing individual interests</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conventional (10-12 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 3:</strong> 10 - 12 years: Good personal relations, approval orientation</td>
</tr>
<tr>
<td><strong>Stage 4:</strong> 12 - 20 years: Authority and social order orientation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Postconventional (&gt; 20 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 5:</strong> 20 - 30 years: Orientation with socially acceptable principles</td>
</tr>
<tr>
<td><strong>Stage 6:</strong> &gt; 30 years: Orientation with universal ethics principles</td>
</tr>
</tbody>
</table>

Educational Styles: The Cycle of Parents and Children

Education is always a **reciprocal** (bilateral) **process**. This means that parents, as well as the child, are always involved. 4 fundamental educational styles can be distinguished:

- **Authoritative:** Precise rules and demands, open communication, warm behavior, regarding of mutual interests.
- **Authoritarian:** Rejection, control, brittle behavior, demanding obedience and
possibly punishment.

- **Permissive**: little to no limits and rules, high forbearance, interests of the child are heavily respected.
- **Neglecting**: Showing little interest in the child, little control, distance, rejection.

**Note**: The authoritative educational style seems to be the most appropriate one for the child’s development.

**Social determinants** like changes in family structures (single parenting, patchwork families, etc.) and the media, significantly influence the child’s development and socialization. Children often do not accept their parents as models anymore and rather choose characters from movies and TV. Beside psychological impacts, “babysitter TV” is a cause of physical inactivity and secondary diseases.

### Psychodynamic Developmental Models: Freud and Erikson

#### Phases of psychosexual development (Freud)

Sigmund Freud’s approach assumes that experiences are formed from one’s personality. He especially emphasized the importance of early childhood psychosexual development. Every human experiment in the different stages, thereby forming his character by satisfying certain **drives**. If this satisfaction of drives cannot be achieved, conflicts emerge and thereby a **fixation** on this stage occurs.

Critique: Freud’s theory lacks any empirical base; neither is the theory falsifiable.

<table>
<thead>
<tr>
<th>Stage/Age</th>
<th>Attributes</th>
<th>Attitude/character due to fixation</th>
<th>Associated disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oral stage</strong> (&lt; 2 years)</td>
<td>Most important instinct is food intake</td>
<td>Demanding, immature, sarcasm, the tendency for dependence/addiction, optimism, generosity</td>
<td>Early-stage: <strong>Schizoid personality disorder</strong>; Late stage: Depression</td>
</tr>
<tr>
<td><strong>Anal stage</strong> (2 – 3 years)</td>
<td>Satisfaction by release/retaining of feces, control over parents</td>
<td>Compulsive, thrifty, meticulous, correct, controlling, stubborn, ambivalent towards superiors</td>
<td><strong>Anankastic personality disorder</strong></td>
</tr>
<tr>
<td><strong>Phallic stage</strong> (3 – 5 years = <strong>oedipal stage</strong>)</td>
<td>The child desires the opposite-sex parent; Boys: <strong>Oedipus complex</strong> and fear of castration; Girls: <strong>Electra complex</strong> and penis envy; &gt;&gt; solving the conflict by identification with the same-sex parent</td>
<td>Rivalry/competition coercion, demonstration of potency (status symbols), high-mindedness, carefree behavior</td>
<td><strong>Hysterical personality disorder</strong></td>
</tr>
<tr>
<td><strong>Latency stage</strong> (6 – 12 years)</td>
<td>Drive energy is channeled into cultural contents, the own intellectual skills are central</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
Stage model of psychosocial development by Erikson

The stage model by Erikson builds on Freud’s theory in large. However, it rates the human development as a life-long process. Erikson classified 8 stages in this process.

- Trust vs. mistrust: 1st year of age. The child learns to show trust or distrust to its environment.
- Autonomy vs. shame/doubt: 2 – 3 years. Curiosity and autonomous exploring drive. If this is suppressed, shame/doubt can occur.
- Initiative vs. guilt: 4 – 5 years. Education and environmental conditions cause initiative or guilt.
- Industry vs. inferiority: 6–11 years. School, peer groups influence the individual.
- Identity vs. role diffusion: 12 – 18 years. Development of own identity or negative world views with role diffusion (perhaps criminal career, dependence, etc.).
- Intimacy vs. isolation: Young adulthood. Emotional, sexual bonds and social relationships are central, otherwise loneliness and isolation.
- Generativity vs. stagnation: Middle adulthood. Family and job are central, or stagnation impends.
- Ego integrity vs. despair: Maturity. Positive retrospect on the lived life (contentment) or resignation/discontent/despair about goals not being achieved.

Development in Early and Middle Adulthood

Young adults often have to orient themselves in different roles simultaneously: partnership, family and job. Role conflicts bring along psychosocial stress. Two established models are the job *demands-resources model* and the *gratification model*.

Women have to battle the *climacteric* stage between the 40th and 50th year of age before the menopause begins. Main complaints are hot flashes, vertigo, sweating attacks, weight gain, and tiredness.

In contrast to that, men are more often affected by the *midlife crisis* than women: Life is interpreted as a chain of disappointments and wrong decisions, and common consequences are divorces and adulteries. Suicide threats should be taken very seriously. Life crises like divorce, the partner’s death or job loss are common reasons for *suicidal thoughts*.

Development in Old Age

There are two controversial theories with respect to psychosocial development in old age:

- **Disengagement theory:** Old people retreat socially and orient inwards.
- **Theory of activity:** Old people want to be socially active.
Social isolation and loss of the partner increasingly characterize the social situation of old people, **decrease of participation due to disability** and uprooting due to referral to retirement homes. Because of constant cuts of pensions, high costs for medical treatments and devices, many people also suffer from pauperism in old age.

**Review Questions**

Solutions can be found below the references.

1. **Match the relevant constellation to the age group 6 - 10 years according to the model of psychosocial development by Erikson.**

   - A. Trust vs. mistrust
   - B. Autonomy vs. shame and doubts
   - C. Initiative vs. guilt
   - D. Industry vs. inferiority
   - E. Identity vs. diffusion of identity

2. **In psychoanalysis, different character types can be described. One of these is characterized by rival and competitive behavior, wanting and demonstrating status symbols, high-mindedness and carefree behavior. To which developmental stage does this character type belong?**

   - A. Oral stage
   - B. Anal stage
   - C. Phallic stage
   - D. Latency stage
   - E. Genital stage

3. **Parents set clear rules in their education, a warm, understanding tone defines the reciprocal relationship between parents and children. The parents try to consider both their interests and the child’s ones equally. Which educational style is described?**

   - A. Anti-authoritarian
   - B. Liberal
   - C. Authoritative
   - D. Authoritarian
   - E. Permissive

**References**


**Correct Answers:** 1D, 2C, 3C